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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2022-0092; FRL-10017-01-R4]

Air Plan Approval; Kentucky; Emissions Inventory Requirements for the 2015 8-Hour Ozone Standard Nonattainment Areas

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a State Implementation Plan (SIP) revision submitted by the Commonwealth of Kentucky, through the Kentucky Energy and Environment Cabinet (Cabinet) on December 22, 2021, to address the base year emissions inventory requirements for the 2015 8-hour ozone national ambient air quality standard (NAAQS) for Kentucky counties in the Cincinnati, Ohio-Kentucky 2015 8-hour ozone NAAQS nonattainment area (hereinafter referred to as the Cincinnati, OH-KY Area), and for Kentucky counties in the Louisville, Kentucky-Indiana 2015 8-hour NAAQS nonattainment area (hereinafter referred to as the Louisville, KY-IN Area). Specifically, EPA is proposing to approve Kentucky's SIP revision addressing the emissions inventory requirements for the 2015 8-hour ozone nonattainment areas for the portions of Boone, Campbell, and Kenton Counties in the Cincinnati, OH-KY Area, and Bullitt, Jefferson, and Oldham Counties in the Louisville, KY-IN Area. These requirements apply to all ozone nonattainment areas. This action is being proposed pursuant to the Clean Air Act (CAA or Act).

DATES: Comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].**

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R04-OAR-2022-0092 at www.regulations.gov. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit www2.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION CONTACT: Sarah LaRocca, Air Regulatory Management Section, Air Planning and Implementation Branch, Air and Radiation Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. The telephone number is (404) 562-8994. Ms. LaRocca can also be reached via electronic mail at larocca.sarah@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Background

On October 1, 2015, EPA promulgated a revised 8-hour primary and secondary ozone NAAQS, strengthening both from 0.075 parts per million (ppm) to 0.070 ppm (the 2015 8-hour ozone NAAQS). *See* 80 FR 65292 (October 26, 2015). The 2015 8-hour ozone NAAQS is set at 0.070 ppm based on an annual fourth-highest daily maximum 8-hour average concentration averaged over three years. Under EPA's regulations at 40 Code of Federal Regulations (CFR) part 50, the 2015 8-hour ozone NAAQS is attained when the 3-year average of the annual fourth-highest daily maximum 8-hour average ambient air quality ozone concentration is less than or equal to 0.070 ppm. *See* 40 CFR 50.19. Ambient air quality monitoring data for the 3-year period must meet a data completeness requirement. *See* 40 CFR part 50, Appendix U. The ambient air quality monitoring data completeness requirement is met when the average percentage of days with valid ambient monitoring data is greater than 90 percent and no single year has less than 75 percent data completeness as determined using Appendix U.

Upon promulgation of a new or revised ozone NAAQS, the CAA requires EPA to designate as nonattainment any area that is violating the NAAQS based on the three most recent years of ambient air quality data. On June 4, 2018 (effective August 3, 2018), EPA designated the 7-county Cincinnati, OH-KY Area as a Marginal ozone nonattainment for the 2015 8-hour ozone NAAQS.[1] *See* 83 FR 25776. Also, on June 4, 2018 (effective August 3, 2018), EPA designated the five-county Louisville, KY-IN Area

[1] The Cincinnati, OH-KY Area consists of the following counties: Boone (partial), Campbell (partial), and Kenton (partial) in Kentucky and the entire counties of Butler, Clermont, Hamilton, and Warren in Ohio. EPA took action on the 2015 8-hour ozone NAAQS nonattainment area emissions inventory requirements for Butler, Clermont, Hamilton, and Warren Counties in Ohio in a separate action. *See* 86 FR 12270 (March 3, 2021).

as a Marginal ozone nonattainment for the 2015 8-hour ozone NAAQS.[2] The Cincinnati, OH-KY Area and the Louisville, KY-IN Area were designated nonattainment for the 2015 8-hour ozone NAAQS using 2014–2016 ambient air quality data.

On December 6, 2018, EPA finalized a rule titled "Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements" (SIP Requirements Rule) that establishes the requirements that state, tribal, and local air quality management agencies must meet as they develop implementation plans for areas where air quality exceeds the 2015 8-hour ozone NAAQS.[3] *See* 83 FR 62998; 40 CFR part 51, subpart CC. This rule establishes nonattainment area attainment deadlines based on Table 1 of section 181(a) of the CAA, including an attainment deadline of August 3, 2021, three years after the August 3, 2018, effective date, for areas classified as Marginal for the 2015 8-hour ozone NAAQS.

Ground level ozone is not emitted directly into the air but is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NO_X and VOC. Section 182(a)(1) of the CAA requires states with areas designated nonattainment for the ozone NAAQS to submit a SIP revision providing a comprehensive, accurate, and current inventory of actual emissions from all sources of

[2] The Louisville, KY-IN Area consists of Bullitt, Jefferson, and Oldham Counties in Kentucky and Clark and Floyd Counties in Indiana. EPA took action on the 2015 8-hour ozone NAAQS nonattainment area emissions inventory requirements for Clark and Floyd Counties in Indiana in a separate action. *See* 87 FR 39750 (July 5, 2022).

[3] The SIP Requirements Rule addresses a range of nonattainment area SIP requirements for the 2015 8-hour ozone NAAQS, including requirements pertaining to attainment demonstrations, reasonable further progress (RFP), reasonably available control technology, reasonably available control measures, major nonattainment new source review, emission inventories, and the timing of SIP submissions and compliance with emission control measures in the SIP.

the relevant pollutant or pollutants in such area. NO_X and VOC are the relevant pollutants because they are the precursors—i.e., the pollutants that contribute to the formation—of ozone.

Based on the nonattainment designation, Kentucky was required to develop a SIP revision addressing certain CAA requirements for the Cincinnati, OH-KY Area and the Louisville, KY-IN Area. Among other things, Kentucky was required to submit a SIP revision addressing the emissions inventory requirements in CAA section 182(a)(1).

II. Commonwealth's Submittal

On December 22, 2021, Kentucky submitted a SIP revision addressing the emissions inventory requirements related to the 2015 8-hour ozone NAAQS for the Cincinnati, OH-KY Area and the Louisville, KY-IN Area.[4] EPA is proposing to approve this SIP revision as meeting the inventory requirements of section 182(a)(1) of the CAA and EPA's SIP Requirements Rule. More information on EPA's analysis of Kentucky's SIP revision and how this SIP revision addresses these requirements is provided below.

III. Analysis of Commonwealth's Submittal

As discussed above, section 182(a)(1) of the CAA requires areas to submit a comprehensive, accurate, and current inventory of actual emissions from all sources of

[4] On October 15, 2020, the Cabinet submitted a certification that included other required elements for ozone nonattainment areas pursuant to CAA section 182(a)(2)(C), Nonattainment New Source Review, and CAA section 182(a)(3)(B), Emissions statements. On August 12, 2020, KDAQ submitted a certification on behalf of the Louisville Metro Air Pollution Control District that included the required elements for ozone nonattainment areas pursuant to CAA section 182(a)(3)(B), Emissions statements. On April 5, 2022, EPA took final action on the portion of Kentucky's October 15, 2020, submission related to CAA section 182(a)(2)(C), Nonattainment New Source Review. *See* 87 FR 19649. On March 9, 2022, EPA took final action on the District's August 12, 2020, submission related to CAA section 182(a)(3)(B), Emissions statements. *See* 87 FR 13177. On April 26, 2022, EPA took final action on the portion of Kentucky's October 15, 2020, submission related to CAA section 182(a)(3)(B), Emissions statements. *See* 87 FR 24429.

the relevant pollutant or pollutants in each ozone nonattainment area. The section 182(a)(1) base year inventory is defined in the SIP Requirements Rule as "a comprehensive, accurate, current inventory of actual emissions from sources of VOC and NO_X emitted within the boundaries of the nonattainment area as required by CAA section 182(a)(1)." *See* 40 CFR 51.1300(p). The inventory year must be selected consistent with the baseline year for the RFP plan as required by 40 CFR 51.1310(b),[5] and the inventory must include actual ozone season day emissions as defined in 40 CFR 51.1300(q)[6] and contain data elements consistent with the detail required by 40 CFR part 51, subpart A. *See* 40 CFR 51.1315(a), (c), and (e). In addition, the point source emissions included in the inventory must be reported according to the point source emissions thresholds of the Air Emissions Reporting Requirements (AERR) in 40 CFR part 51, subpart A.

Kentucky selected 2017 as the base year for the emissions inventories, which is the most recent calendar year for which a complete triennial inventory is required to be submitted to the EPA under 40 CFR part 51, subpart A. This base year is consistent with the regulations for 2015 ozone NAAQS nonattainment area base year emission inventory regulations. *See* 40 CFR 51.1315(a) and 51.1310(b). The emissions inventory is based

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[5] 40 CFR 51.1310(b) states that "at the time of designation for the ozone NAAQS the baseline emissions inventory shall be the emissions inventory for the most recent calendar year for which a complete triennial inventory is required to be submitted to the EPA under the provisions of subpart A of this part. States may use an alternative baseline emissions inventory provided that the year selected corresponds with the year of the effective date of designation as nonattainment for that NAAQS. All states associated with a multi-state nonattainment area must consult and agree on using the alternative baseline year. The emissions values included in the inventory required by this section shall be actual ozone season day emissions . . . ." For additional information, please see the guidance document titled "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations," EPA–454/B–17– 003, July 2017, available at: https://www.epa.gov/air-emissions-inventories/air-emissions-inventory-guidance-implementation-ozone-and-particulate.

[6] "Ozone season day emissions" is defined as "an average day's emissions for a typical ozone season work weekday. The state shall select, subject to EPA approval, the particular month(s) in the ozone season and the day(s) in the work week to be represented, considering the conditions assumed in the development of RFP plans and/or emissions budgets for transportation conformity." *See* 40 CFR 51.1300(q).

on data developed and submitted by both the Cabinet and Louisville Metro Air Pollution Control District (District)[7] to EPA's 2017 National Emissions Inventory (NEI), and it contains data elements consistent with the requirements of 40 CFR part 51, subpart A.

Kentucky's emissions inventory for the Cincinnati, OH-KY Area and Louisville, KY-IN Area provides 2017 typical average summer day emissions for NO_X and VOC for the following general source categories: point sources, nonpoint sources,[8] on-road mobile sources, and non-road. For the Kentucky portion of the Cincinnati, OH-KY Area, the following percentages represent the portions of each Kentucky county that are located in the Area: Boone: 95 percent; Campbell: 92 percent; and Kenton: 95 percent. The nonattainment area apportionment percentages were applied to the point, nonpoint, and nonroad sectors. For on-road emissions, vehicle miles traveled (VMT) data for the nonattainment portions of the counties were used as inputs to the MOVES 3 model. Annual emission totals were then converted to tons per summer day by taking the calculated annual emissions totals, multiplying them by 25 percent to account for the four seasons, and then dividing by the 92 days of the summer season.[9] For the Kentucky

[7] The Cabinet submitted emissions inventories for the KY portion of both the Cincinnati, OH-KY and the Louisville, KY-IN nonattainment areas for the 2015 8-hour ozone standard. The District provided emissions information for the Jefferson County portion of the Louisville, KY-IN nonattainment area for the 2015 8-hour ozone standard.

[8] On June 2, 2022, Kentucky informed EPA that the Base Year (Nonattainment) Emissions Inventory State Implementation Plan it submitted on December 22, 2021, included biogenic emissions in the nonpoint category, whereas biogenic emissions were excluded from the inventories developed for Kentucky's redesignation requests and maintenance plans for the Cincinnati and Louisville Areas, in accordance with EPA Guidance (*Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations* (May 2017)). Kentucky's June 2, 2022, email is included in the docket for this proposed action.

[9] For sources that reported seasonal operations (primarily in Jefferson County), the seasonal operations data was used to calculate summer emissions, which were then divided by the 92 days in the summer months (June, July, and August) to derive tons per ozone season day / tons per summer day emissions. For the remaining sources, tons per summer day emissions were calculated by dividing annual emissions by four and then by the 92 days of summer. EPA has preliminarily determined that this is an appropriate method for determining summer day emissions, as the average summer operations from facilities reporting such information were determined to be approximately 24.6% to 26.3% (approximately 25%) of the annual

portion of the Louisville, KY-IN Area, summer day emissions were calculated using a "Summer's Operation Percentage" as reported by facilities and explained in Appendices E.2 and A.3 of the submittal. Table 1 and Table 2 provide a summary of the emissions inventories for the Kentucky portions of the Cincinnati, OH-KY Area and the Louisville, KY-IN Area, respectively.

Table 1 - 2017 Emissions for the Kentucky Portion of the Cincinnati, OH-KY Area

(Tons/Summer Day)

County	Point		Nonpoint		On-road		Non-road	
	NO_X	VOC	NO_X	VOC	NO_X	VOC	NO_X	VOC
Boone	9.47	2.57	1.60	14.78	3.78	2.31	0.67	1.20
Campbell	0.32	0.41	1.08	6.46	1.78	1.08	0.34	0.37
Kenton	0.30	0.66	1.82	7.43	3.77	2.12	0.58	0.65

Table 2 – 2017 Emissions for the Kentucky Portion of the Louisville, KY-IN Area

(Tons/Summer Day)

County	Point		Nonpoint		On-road		Non-road	
	NO_X	VOC	NO_X	VOC	NO_X	VOC	NO_X	VOC
Bullitt	0.85	9.33	0.84	18.13	3.49	1.19	0.26	0.42
Jefferson	34.81	21.56	6.66	41.57	20.97	7.85	4.32	4.02
Oldham	0.13	0.04	0.87	5.98	1.85	0.69	0.30	0.41

emissions. Furthermore, for one of the largest contributors to these remaining emissions, the Louisville International Airport, this method of approximation is supported by data available on monthly flights indicating that flights in June, July, and August made up almost precisely one quarter of total annual flights (25.1%).

The emissions reported for the Cincinnati, OH-KY Area and for the Louisville, KY-IN Area reflect the emissions within the portions of Boone, Campbell, and Kenton Counties, and within Bullitt, Jefferson, and Oldham Counties, respectively, comprising the nonattainment areas. The inventory contains point source emissions data for facilities located within the Kentucky portions of the Areas. More detail on the emissions for individual source categories is provided below and in the appendices to Kentucky's December 22, 2021, submittal.

Point sources are large, stationary, identifiable sources of emissions that release pollutants into the atmosphere. NO_X and VOC emissions were calculated by using facility-specific emissions data reported to the 2017 NEI from sources that are required to submit inventory data according to the AERR. A detailed account of the point source emissions can be found in Appendix A of Kentucky's submittal.

Nonpoint sources are small stationary sources of emissions, which due to their large number, collectively have significant emissions (e.g., dry cleaners, service stations). Emissions for these sources were obtained from the 2017 NEI. A detailed account of the nonpoint source emissions can be found in Appendix B of Kentucky's submittal.

On-road mobile sources include vehicles used on roads for transportation of passengers or freight. For both the Cincinnati, OH-KY Area and Louisville, KY-IN Area, on-road emissions inventories were developed using the latest version of EPA's Motor Vehicle Emissions Simulator (MOVES), MOVES3, for each ozone nonattainment county. County level on-road emissions modeling was conducted using county-specific

vehicle populations and other local data. A detailed account of the on-road source emissions can be found on page 6, page 12, and in Appendix C of Kentucky's submittal.

Non-road mobile sources include vehicles, engines, and equipment used for construction, agriculture, recreation, and other purposes that do not use the roadways (e.g., lawn mowers, construction equipment, railroad locomotives, and aircraft). Kentucky obtained emissions for the non-road mobile sources from the 2017 NEI. A detailed account of non-road mobile source emissions can be found in Appendix D of the December 22, 2021, submittal.

EPA has preliminarily determined that Kentucky's emissions inventories for the Cincinnati, OH-KY and the Louisville, KY-IN Areas meet the requirements under CAA section 182(a)(1) and the SIP Requirements Rule for the 2015 8-hour ozone NAAQS, as well as the requirements in 40 CFR part 51, subpart A.

IV. Proposed Action

EPA is proposing to approve the SIP revision submitted by Kentucky on December 22, 2021, addressing the base year emissions inventory requirements for the 2015 8-hour ozone NAAQS for the Cincinnati, OH-KY Area and Louisville, KY-IN Area. EPA proposes to find that the Commonwealth's submission meets the requirements of sections 110 and 182 of the CAA.

V. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. *See* 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided they meet the criteria of the CAA. This proposed action

merely proposes to approve state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

The SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

(**Authority:** 42 U.S.C. 7401 *et seq.*)

Dated: July 19, 2022.

Daniel Blackman,

Regional Administrator,

Region 4.

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